4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

PEOPLE ON THE DESERT

Like many other Indians, the Papago are a young people. About 40 per cent of those living on the three reservations in 1942 were under eighteen years of age. The average age of males was twenty-three years and of females twenty-one.[3]

Costumes are not so colorful as those of some Arizona and New Mexico tribes such as the Navaho. Most of the older women wear the ankle-length Mother Hubbard cotton dress with loose blouse used by many older Indian and Mexican women in the Southwest and in Sonora. With this they wear a shawl or *rebozo* usually wrapped tightly around the head with an end hanging down the back, rather than loosely draped and allowed to fall over the shoulders. Younger women and girls wear cotton or rayon dresses in contemporary American style. Fiesta dresses are more colorful, and one occasionally sees the brilliant rayons which added splashes of color to gatherings in former years. Males from the age of one to one hundred wear denim or khaki pants with shirts of cotton for work and bright rayon for festive occasions, kerchiefs about the neck, with brimmed felt hats, and cowboy boots if they can possibly afford them. Some of the educated men have American-style "business suits" for trips off the Reservation. Good clothes, particularly shoes, are bought when there is cash on hand, and a man may spend considerable sums on hats and boots. Even in the conservative western districts of the Reservation, the people buy American clothing, often quite "fancy," for the children and young people. Papago believe clothing should be neat, clean, and modest but not necessarily sober; they all want to "look nice" before other people.

Typically the Papago move with a slow dignity and grace, and only in near-emergency situations does the word "hurry" have any meaning for them. A rider who runs his horse when he is not roping or running cattle is almost certain to elicit the comment, "Oh, he's drunk."

From early childhood the Papago is taught to be quiet, self-contained, and not to become angry. A reserved person whose equanimity is difficult to shake, he expresses opposition or resentment quietly, for he believes in discussion without argument and angry words. He does not ask direct questions or make statements directly; a question is asked through a circumlocution, and answers are given in the same manner. To white people it sometimes sounds like speech in parables, but to a Papago the meaning is perfectly clear. The curiosity of white people often causes difficulty between them and the Indians. Questioning about unimportant things the Papago regard as rather humorous, but queries about their personal affairs seem to them extremely bad taste.

3. Population data from United States Bureau of Indian Affairs, *Program, Papago Indian Reservation, Arizona*; see also chaps. v and vii below.

7: Lumholtz N-5 (1909-1910) 1912
NU28 Papago NU28

die from it, having acquired it through contagion. Although in no way a prison as to its restrictions, nevertheless the school as at present conducted does them harm physically. The confinement to which they have not been accustomed seems to undermine their health. In these days of advanced methods of teaching some remedy for this condition no doubt will be found. One absolutely necessary change is to alter the construction of the school-houses so as to make them sanitary through unlimited access of air. Even the Presbyterian Mission, which has been of considerable benefit to the Indian, has erected outside of Tucson incredibly inappropriate buildings, made of brick and substantial, to be sure, but singularly out of place in the glare and heat of the Arizona desert. Prof. R. H. Forbes, of Arizona University, told me that in the White Mountain Apache school, at White River, ninety per cent of the children have tuberculosis, chiefly glandular. This statement was made to him by the physician in charge. Would it not be better to leave the Indians uneducated than to proceed in this manner?

Not long ago the makai (medicine-men) had as many as five wives each, while the usual number for the ordinary man was two. At present it is very rare to find a Papago with more than one wife, and the average number of children in a family is usually no less than eight, but the mortality among infants is great. The position of woman is equality with man. To be sure, the man never carries burdens—that is relegated to the woman's domain—but she is the mistress of the house. She is,

175 pattern is well known, living in an area of between five
101 and ten inches of rainfall annually and located between
131 the Ajo Mountains on the west and the Baboquivari Mountains
132 on the east; and the eastern riverine sedentary Papagos, or "Sobaipuris", living in an area of between ten and fifteen inches of rainfall annually and located between the Baboquivari Mountains on the west and the San Pedro Valley on the east.

175 Papago agricultural techniques were simple.
105 Most fields were small, located at the foot of steep
241 slopes, where intermittent streams emerged at the edge of the flat desert land at these "mouths" (akchin in Papago), a small cultivated area could be watered, if rain came in the adjacent hills at the right time. Small irrigation channels were used to bring water from larger mountain streams to fields in the flat valleys, but no large-scale development of irrigation was possible such as the Gila and Salt valleys permitted. Along the Santa Cruz River, [162] however, in the vicinity of the San Xavier Mission south of Tucson, extensive irrigation canals were used in pre-Spanish times and, even though smaller in extent than the aboriginal irrigation systems along the Gila and Salt, permitted a concentration of population at Bac which exceeded the size of any of the Pima villages further north. (Dr. Bernard Fontana, Personal Communication).

175 Mexico gained its independence in 1821, Papagos from Sonora
177 sometimes fled northward into what is now Arizona, introducing Spanish ways acquired during their longer and more
175 intensive contact with non-Indians. The Gadsden Purchase,
648 which added the lands south of the Gila River to the United States in 1853, resulted in the Papago Indians losing their Mexican citizenship, without gaining full United States citizenship. Their lands were considered at that time as available for white settlement, and many springs, wells, and grazing areas were soon claimed by ranchers moving into the area. The seriousness of the trespass was not recognized in early pioneer days with respect to the vast desert
175 areas west of Tucson. The situation was different, however,
657 with respect to the compact settlement of Indians around
[162] the San Xavier Mission and, for this group, a reservation was established in 1874 by Executive Order. By this means about 70,000 acres of land near the Santa Cruz River were
[423] protected from white encroachment. When much of the area
[311] was allotted to individual Indians in 1890, 1,580 acres were reported to be under irrigation and an additional 6,440 acres were considered suitable for farming if water could be made available; the remaining acreage was suitable only for grazing.

175 About this same time, the 1880's and 1890's, a burst of mining activity (in the area of the present main reservation) brought a rapid development of many new wells and the improvement of old ones, to supply the towns that

Schuchk contains but three permanent co-resident groups. There are no churches. During the school year the cook and maintenance man live here. There is a telephone for general use of the district, and, there is a permanently residing pair of Anglo families. Thus, with its phone, its school, its central location for the district council, Schuchk may be classified as a service center but not a village. 621 361 [365] [162]

Tat Momoli (Jackrabbit) and Shopishk (Sif Cidak District). According to two informants living in Gu Komelik, Tat Momoli contains but three families. There is a church, but no feast house. The entry road is in very poor condition and the Catholic priest seldom visits the village.

Only two people live in Shopishk according to one informant. There is no church and few people visit this place. Nevertheless, a woman lives here who is somewhat famous for her pottery. [323]

In addition to the above settlements, there are about 100 locations which are occupied either permanently or temporarily for a wide variety of purposes. In most instances, they are used by people engaged in stock raising, or in a combination of stock raising and farming who must live more or less permanently near their holdings. It must be recalled that the main Papago Reservation is an area of 4,328 square miles with relatively few miles of improved roads. Some other localities are used temporarily or 361 221 [233] [241]

361 Some other localities are used temporarily or
221 seasonally as cattle and farm camps and others are used
[222] during the season of saguaro fruit harvest. It has been noted that in some instances scattered settlements are also used as "vacation" homes.

161 The Papago Population. The aspect of the Papago population most important to this study is its small size,
[162] relative to the large area it occupies. It is scattered over the entire Reservation in small villages, none of more than two or three hundred people with the exception of Sells,
[433] the largest town, where about 650 reside (Table 5). Never-
[182] theless, because the resources of the region are limited, the relatively small population is supported only inadequately, and its exact size is of importance in evaluating the relationships between the people and their resources.

[162] According to the count completed by the Bureau of Ethnic Research for the year 1959, which will be reported on in detail below, the total population of the main reservation was 4,166, with 628 additional Papagos on the San Xavier and Gila Bend reservations and 6,981 living elsewhere or with residence unknown, for a total living Papago population of 11,775.

The main reservation population of 4,166 compares with a total of 5,313 Papagos located on the reservation in 1914, according to a count made by Herbert V. Clotts (Clotts 1915). It must be assumed that there were relatively few Papagos off the main reservation in 1914 and

that the difference between 5,313 and the 1959 population of 11,775 represents an absolute increase in population. This is approximately two per cent a year, well within normal expectation. The important point is that the Papago have not attempted to maintain an increasing population on the same land base but are moving off the reservation at a rate about equal to, or exceeding, the rate of natural increase.

The Clotts survey contains other interesting data on Papago settlements. Clotts listed, in his description of settlements, wells, fields, and so on, the population of 52 locations (see Map 5). Of these only 19 had a population of 100 or more, the largest being Topawa (500), Santa Rosa (400), San Miguel (325), Gu Oidak (Big Fields) (250), and Anegam (200). The care with which Clotts appears to have made his estimates, and his systematic recording of many details at each location visited, justifies the placing of considerable confidence in these estimates.

A comparison of populations by district on the main reservation is given in Table 3.

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Table 3. Papago Population by Districts 1914 and 1959

District	1914 (Clotts)	1959 (BER)
Baboquivari	949	562
Chukut Kuk	512	214
Gu Achi	695	531
Gu Vo	200	230
Hickiwan	222	346
Pisinimo	396	330
Schuk Toak	565	370
Sells	659	1,026
Sif Oidak	1,115	552
Total	5,313	4,161

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[101]

The Present Population. The information which follows is derived from a Papago population register secured by the Bureau of Ethnic Research in 1958 and 1959 in connection with a research project sponsored and in major part financed by the Biometry Branch of the National Cancer Institute. The work was under the direction of Dr. Robert A. Hackenberg and cooperating agencies were the Papago Tribe, the Division of Indian Health of the Public Health Service, the Bureau of Indian Affairs, and the Arizona State Office of Vital Statistics.

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A population register is not a census. It is intended to serve as a permanent record of identifiable

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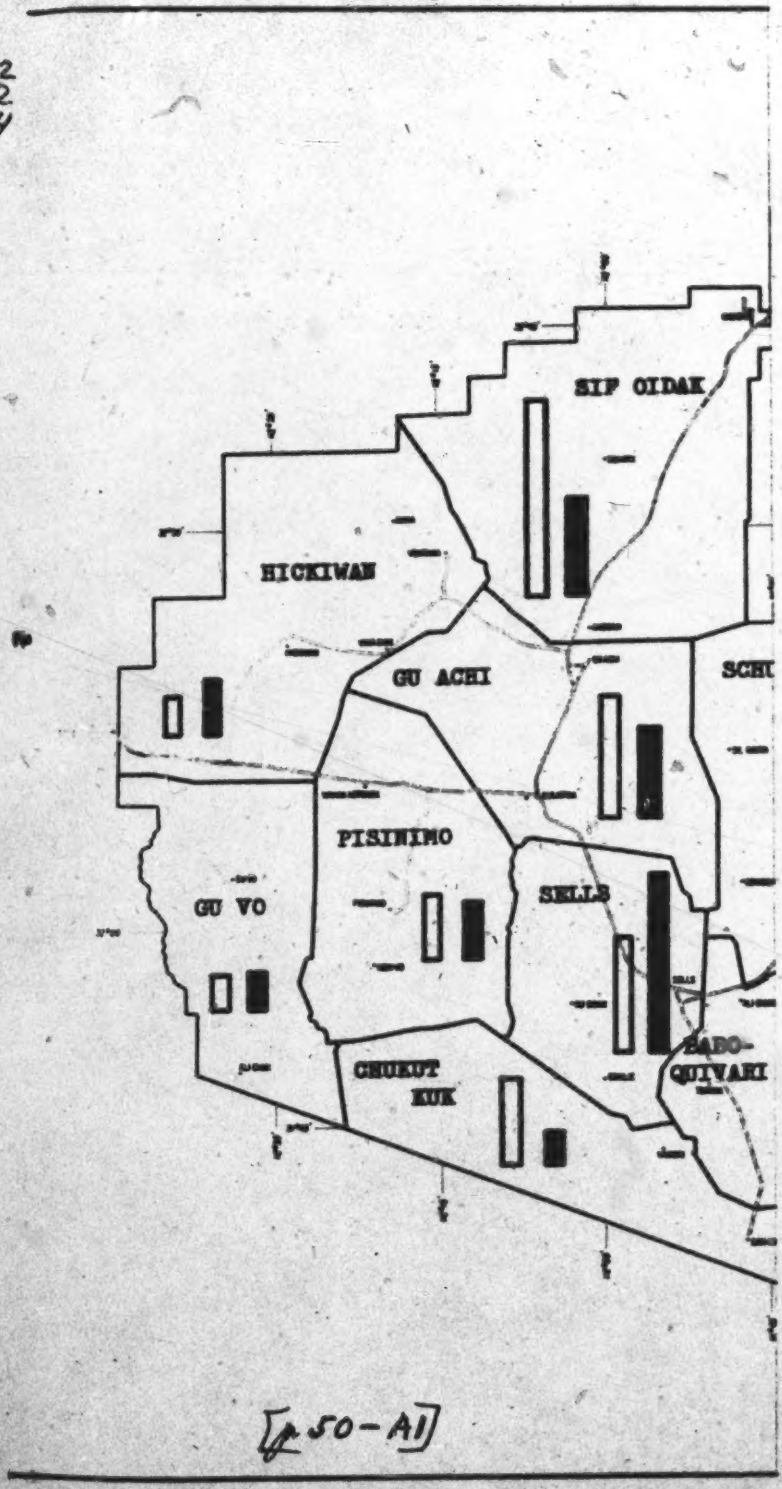

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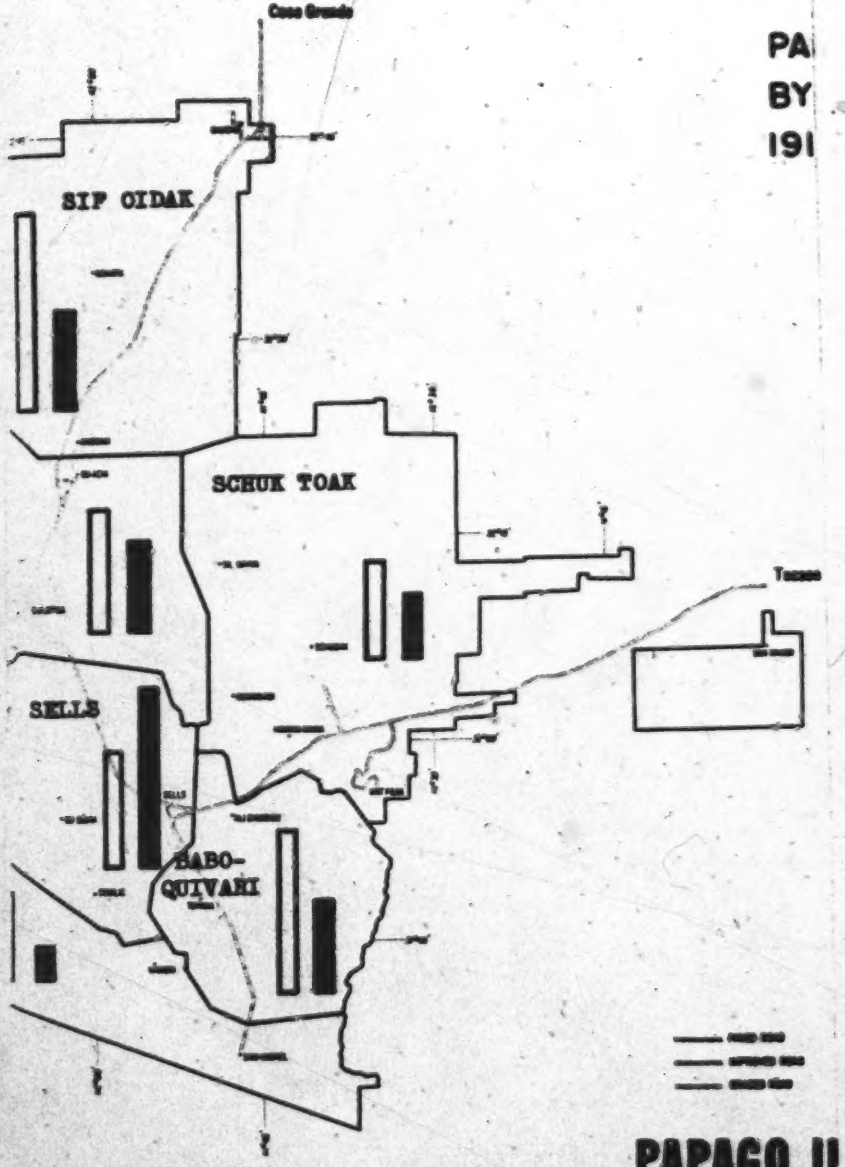

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PAPAGO II

[G.50-A2]

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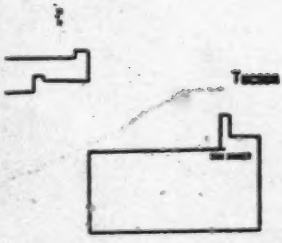
MAP 5,
PAPAGO POPULATION BY DISTRICTS 1914 AND 1959



1914 (CLOTTS) 1959 (BER)

SCALE
1/8" = 100 PEOPLE

PAVED ROAD
IMPROVED ROAD
GRADED ROAD

PAPAGO INDIAN RESERVATION

1963

E-50-A3

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3. No person will be considered a Papago Indian if he did not have at least one grand-parent considered to be a full-blood Papago Indian by other Indians in his community.

The strict limits of this definition, however, have not been adhered to in this report. For total population figures we are counting all individuals of any degree of Papago ancestry, and we are counting individuals who, as yet, have not been linked by kinship to reservation house-builders. In Chapter IV we shall limit our discussion to a somewhat smaller group of Papagos to be defined as the "administrative population".

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[161] The total living Papago population, according to our count, is 11,775: 5,816 male and 5,959 female. As everyone has long suspected, about half of the Papagos live in non-reservation communities, mostly in Arizona. The exact percentage is 47% but we have every reason to believe that almost all of the individuals for whom we have no residence are living off reservations. By adding this group of 531 individuals to the off reservation population, the percentage climbs to 49%.

The total living Papago population, by sex and residence, is as follows:

Table 4. Residence of the Total Papago Population by Sex. 162

Residence	Total	Percent	Male	Female
On Papago Reservations	4,794	43%	2,396	2,398
On Other Reservations	1,201	11%	609	591
Off Reservation	5,249	47%	2,540	2,710
Total	11,244		5,545	5,699
Unknown Residence	531		271	260
Total, Irrespective of Residence	11,775		5,816	5,959

We have not, of course, enumerated all living 128
Papago Indians and we will not be able to make an estimate of under enumeration until a test is made. It is our guess that our error is in the neighborhood of 5%. Much more difficult will be an attempt to estimate an error of over enumeration which traces to the difficulty of securing records of deceased Indians thus causing us to carry as living many individuals who are deceased. This could cancel out the under enumeration mentioned above.

The count is for the year 1959. A conservative 161
estimate of annual population increase would be two percent. On this basis we estimate that there are now 12,745 living individuals of some degree of Papago ancestry.

The distribution of the 4,794 individual Papagos 162
whose usual home is on the Sells, San Xavier, and Gila Bend reservations is as follows:

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Table 5. Residence of the Reservation Population by Sex

Residence	Total Number	%	Male	Female
ON RESERVATION				
Total	4,789**		2391	2398
Baboquivari	562	11.74	292	270
Ali Chukson	153		84	69
Komelik	47		20	27
Supi Oidak	31		18	13
Topawa	224		115	109
Other Places	107		55	52
Chukut Kuk	214	4.50	114	100
San Miguel	76		46	30
Vamori	65		38	27
Other Places	73		30	43
Gu Achi	531	11.09	245	286
Gu Achi	264		116	148
Ko Vaya	52		23	29
Quijotoa	50		13	37
San Serafin	32		15	17
Other Places	133		78	55
Gu Vo	230	4.80	129	101
Gu Vo	135		79	56
Ali Chuk	80		38	42
Other Places	15		12	3
Hickiwan	346	7.22	179	167
Hickiwan	127		74	53
Hotason Vo	39		18	21
Kaka	65		28	37
Schuchuli	29		12	17
Vaya Chin	12		5	7
Ventana	58		34	24
Other Places	16		8	8

(Table 5 Continued)

Residence	Total Number	%	Male	Female
Pisinimo	330	6.89	150	180
Kom Vo	52		23	29
Pisinimo	136		59	77
Wahak Hotonok	56		25	31
Other Places	86		43	43
Schuk Toak	370	7.73	187	183
Chiawuli Tak	56		27	29
Comobabi	99		55	44
Havana Nakya	64		35	29
Pan Tak	56		19	37
Schuchk	13		8	5
Sil Nakya	51		27	24
Viopuli	25		13	12
Other Places	6		3	3
Sells	1,026	21.42	503	523
Cowlic	91		43	48
Gu Oidak	213		111	102
Sells	657		315	342
Other Places	65		34	31
Sif Oidak	552	11.52	286	266
Anegam	157		83	74
Chuichu	227		116	111
Gu Komelik	14		7	7
Kohatk	50		26	24
Viava Vo	66		32	34
Other Places	38		22	16
San Xavier	454	9.48	235	219
Gila Bend	174	3.63	71	103

** Five individuals in the earlier count have been removed.

162 Age Distribution. The median age of a person of Papago descent is between 19 and 20 years. The median age of the rural population of the United States is 27.8. There is no doubt that this is a young population and that the age distribution is comparable to populations where living conditions are difficult, where modern sanitation practices are not adhered to, and where the application of modern medicine is not yet reflected in population figures.

162 171 A comparison of age groups with the United States rural population in 1956 is given below.

Table 6. Total Papago Population by Age Groups Compared with Rural America

Age Group	Papago Number	Papago Percent	Rural America Percent
Under 5 years	1671	14.65	12.39
5 to 9 years	1598	14.01	11.98
10 to 14 years	1335	11.70	9.57
15 to 19 years	1158	10.15	7.32
20 to 24 years	993	8.70	5.10
25 to 34 years	1624	14.24	13.26
35 to 44 years	1156	10.13	13.22
45 to 54 years	891	7.81	10.59
55 to 64 years	512	4.48	7.97
65 and over	466	4.08	8.56
Total	11,404		
Age not known	371		

144 162 Race Composition. An examination of our statistics on the age and residence of Papagos of mixed ancestry (whether the mixture is with non-Indians or with members of other Indian tribes) reveals that mixed-blood Papagos and marriages of Papagos with non-Papagos have been increasing in frequency and that, as would be expected, mixed marriages are most common among Papagos living off the reservation. (Table 7)

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Table 7. Racial Composition of the Total Papago Population by Age and Residence

	ON RESERVATION					OFF RESERVATION				
Age Group	Total	Full Blood Number	%	Mixed Blood Number	%	Total	Full Blood Number	%	Mixed Blood Number	%
Under 5	569	479	84	90	16	1004	518	52	486	48
5 to 9	631	534	85	97	15	916	493	54	423	46
10 to 14	578	517	89	61	11	737	410	56	327	44
15 to 19	437	399	91	38	9	691	396	57	295	43
20 to 24	348	329	95	19	5	613	410	67	203	33
25 to 34	585	555	95	30	5	989	733	74	256	26
35 to 44	493	471	96	22	4	642	529	82	113	18
45 to 54	445	429	96	16	4	427	334	78	93	22
55 to 64	302	295	98	7	2	190	166	87	24	13
65 & over	343	340	99	3	1	106	98	92	8	8
Total	4794	4408	92	386	8	6453	4171	65	2282	35
Age not Known	63	60		3		138	84		54	

Residence. As was noted above, 54% of all Papagos 162
of known residence usually make their home on the three [131]
Papago reservations or on other Arizona reservations. The [128]
count, however, must be taken with some caution since our
informants could not be expected to give uniform answers to
the question respecting "usual present residence". The [167]
majority of reservation residents move off the reservation

162 for widely varying lengths of time so that, in many cases,
167 it would be difficult to say whether the "usual" residence
128 was off the reservation or on the reservation. Assigning residence on the basis of the location of a family at the time of our interviews would have resulted in even more misleading figures since the number counted, as in the case of the United States census, would depend upon the season of the year when the interviews took place.

It is, of course, quite risky to interpret the statistics on residence by age and sex. No doubt a great [561] many factors enter. Adults in the age bracket 20 to 44 are more apt to be living off the reservation than individuals in other age groups. This could result from two factors: Younger adults of this generation are more inclined to seek work in off-reservation communities, and older adults of this generation are inclined to return to the reservation as they grow older. Among children, the small differences in residence are probably traceable to the Papago desire to place school age children with relatives on the reservation when an off-reservation move is made.

Differences in residence by sex have not been tabulated for this report and are too small to have any meaning by age groups. Adult men and women move off the reservations in about equal numbers and it must be concluded that married couples, on the whole, move together when a move is made. The number of women exceeds the number of men in the

 [TEXT CONTINUES ON P. 62]

●162 •

Table 8. Residence of t

Residence	Under 5 Years	5 to 9 Years	10 to 14 Years	15 to 19 Years
ON RESERVATION				
Total	736	841	754	583
Main Reservation	480	545	505	401
San Xavier	65	67	49	27
Gila Bend	24	19	24	9
Other Arizona Reservations	167	210	176	146
OFF RESERVATIONS				
Total	837	706	561	545
Arizona	744	601	483	442
U. S. Except Ariz.	80	81	53	64
Mexico	13	24	22	24
In Institutions	0	0	3	15
Total	1573	1547	1315	1128
Residence Unknown	98	51	20	30
Percent living off the reservation	53%	46%	43%	48%

[p. 61-sec. A]

●/62 3. **Residence of the Total Papago Population by Age**

to ars	10 to 14 Years	15 to 19 Years	20 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 and Over
41	754	583	453	744	57	509	335	378
45	505	401	310	495	43	384	255	302
67	49	27	25	59	4	51	32	33
19	24	9	13	31	1	10	15	8
10	176	146	105	159	8	64	33	35
06	561	545	505	830	55	363	157	71
01	483	442	339	633	43	273	121	46
81	53	64	104	138	7	36	13	3
24	22	24	27	39	3	51	22	16
0	3	15	35	20	1	3	1	6
47	1315	1128	958	1574	113	872	492	449
51	20	30	35	50	2	19	20	17
6%	43%	48%	53%	53%	49	42%	32%	16%

[p. 61 - sec. B]

● 162

lation by Age

) ?	45 to 54 Years	55 to 64 Years	65 and Over	Total	Age Not Known	Total
	509	335	378	5910	85	5995
	384	255	302	4112	54	4166
	51	32	33	452	2	454
	10	15	8	167	7	174
	64	33	35	1179	22	1201
	363	157	71	5133	116	5249
	273	121	46	4116	62	4178
	36	13	3	651	13	664
	51	22	16	273	41	314
	3	1	6	93	0	93
	872	492	449	11043	201	11244
	19	20	17	361	170	531
	42%	32%	16%		58%	47%

[p. 61 - sec. C]

age bracket 20 to 44 by about two percent and the number of women in the same age bracket, living on the reservation, exceeds the number of men by about the same proportion. 162 167 128

Origin. In order to secure some measure of Papago population mobility, an attempt was made to secure the place of birth or, for older people, the place in which they lived as children. For our total population of 11,775 we have data on age and place of origin for 10,795. The comparable figure for known age and residence is 11,043. Whereas 46% of people with known residence live off the reservations, only 24% of people with known origin originated off the reservation. The shift toward increasing numbers of [178] Papagos with off-reservation origin occurs rather evenly from among the oldest people, with seven percent originating off the reservation to the youngest people with 44% originating off the reservation. Another way of indicating the same trend is to say that 16% of Papagos over the age of 65 live off the reservations and 7% originated there, whereas 53% of Papagos under the age of five live off the reservations and 44% originated there. In between, 53% of Papagos between ages 20 and 24 live off the reservations and 18% originated there.

● 162

Table 9. Origin of

Residence	Under 5 Years	5 to 9 Years	10 to 14 Years	15 to 19 Years
ON RESERVATION				
Total	852	981	945	833
Main Reservation	583	658	660	623
San Xavier	73	84	69	41
Gila Bend	24	23	25	9
Other Reservations	172	216	191	160
OFF RESERVATION				
Total	682	538	351	278
Arizona Non-Reservation	626	479	313	233
U. S. Except Ariz.	40	32	11	7
Mexico	16	27	27	38
Total	1534	1519	1296	1111
Origin Unknown	137	79	39	47
Percent Originating Off Reservations	44%	35%	27%	25%

[163-sec. A]

162

able 9. Origin of the Total Papago Population by Age

5 to 9 ears	10 to 14 Years	15 to 19 Years	20 to 24 Years	25 to 34 Years	35 to 44 Years	45 to 54 Years	55 to 64 Years	65 ar Ov
981	945	833	777	1289	966	739	415	3
658	660	623	587	998	815	623	350	3
84	69	41	44	92	65	45	32	
23	25	9	17	35	13	12	14	
216	191	160	129	164	73	59	19	
538	351	278	170	257	133	106	54	
479	313	233	131	158	51	23	5	
32	11	7	4	9	6	1	0	
27	27	38	35	90	76	82	49	
519	1296	1111	947	1546	1099	845	469	4
79	39	47	46	78	57	46	43	
35%	27%	25%	18%	17%	12%	13%	12%	

[p.63-sec. B]

162

2 Population by Age

35 to 44 Years	45 to 54 Years	55 to 64 Years	65 and Over	Total	Age Not Known	Total
966	739	415	398	8195	68	8263
815	623	350	341	6238	48	6286
65	45	32	29	574	2	576
13	12	14	8	180	10	190
73	59	19	20	1203	8	1211
133	106	54	31	2600	72	2672
51	23	5	5	2024	30	2054
6	1	0	0	110	7	117
76	82	49	26	466	35	501
1099	845	469	429	10795	140	10935
57	46	43	37	609	231	840
12%	13%	12%	7%		51%	24%

[4.63-sec. C]

Population Conclusions. Two very clear trends are indicated in our analysis of the total Papago population: (1) Papagos have been moving off the reservation in ever increasing numbers during the lifetime of the present population and (2) contact with the outside world has accelerated the intermarriage of Papagos with non-Papagos. Data, not here reported, shows that the majority of these marriages are between Papagos and members of other Indian tribes.

In addition to the more or less permanent residence shift indicated above, data to be presented in Chapter IV will show a high rate of seasonal and temporary movement off the reservation.

In his preliminary report on the Papago Population, prepared in 1961, Dr. Robert A. Hackenberg prepared an analysis respecting the transitional position of the Papago midway between reliance upon the institutions of native society and the acceptance of the alternatives provided by Federal programs and the opportunities in the surrounding non-Indian off-reservation areas. The following analysis is from his report and is in no material respect altered by the more precise information gathered during the past two years.

Age Distribution. The significance of the age distribution developed from the 1959 figures may be seen through the comparisons made in the following table.

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Table 10. Age Proportions
of "Primitive" and "Civilized" Groups

Age Group	Navajo	1959 Papago	Sweden
0- 4	17.1%	14.65%	9.1%
5-14	28.9	25.71	13.9
15-24	20.0	18.86	12.9
25-34	11.3	14.24	15.6
35-44	8.2	10.13	15.5
45-54	5.9	7.81	13.0
55-64	3.6	4.48	10.0
65+	4.2	4.08	10.1

The columns show the differing proportions of "primitive" and "civilized" populations which appear in the various age classes. The basic variable is life expectancy. In populations such as the Navajo, with short life-span, there is a tendency for a large proportion of the total group to be concentrated in the lower age ranges. In Western European civilization, where nations have the world's longest life expectancies, the population when grouped by age, tends to distribute equally across all categories.

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The transitional nature of the Papago population is illustrated by comparison of proportions of all three populations under 25 years of age. The Navajo proportion is 66%, the Papago is 59%, and the Swedish, 36%. The table above shows the Papago proportion in each age class to fall between the extremes represented by Sweden and Navajo.

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Race Composition. The trend in favor of greater racial mixture at the younger age levels has already been noted. One out of every three Papago children born today has at least

one parent who is not a Papago fullblood. Thirty years ago the proportion was one out of thirty or less. 144 162

Mixture at the present time is by no means sufficient to imply that biological assimilation of the Papagos is taking place, or is likely to occur. Papago outgroup marriages has become a significant factor in the 35-55 year age group, however. This inference is warranted by the proportion of mixedblood children appearing in the birth through 25 year age classes. The visible effect of this mixture will be lessened by the preference pattern of Papagos for other Indians rather than non-Indians. Still, the accelerating rate of out-group marriage indicates the probability of profound behavioral changes within the next several generations of Papago family life. 144 162 582

Origin Composition. The first substantial proportion of the Papago population to originate off the reservation (25%) appears in the 15-19 year age class. This proportion increases to 44% in the 0-4 class. These figures indicate that the majority of the Papago births are still occurring within reservation families, but the balance is shifting toward off-reservation origin. Projection of the present trend indicates a majority of Papagos will originate outside Papago reservation areas within the next twenty-five years. This projection is based on the observation that there has been an average 5% increase in the proportion of each successive age group born off the reservation in the past 25 years. 162 161 178

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Residence Composition. The thirty percent increase in off-reservation residence between the 65+ and 15-24 age categories is of obvious significance. The trend displayed is reversed in the five through 19 age classes, however. The interpretation of this reversal opens several possibilities, and a choice between them must await examination of further evidence.

If the birth rate of reservation families were considerably higher than that off the reservation, the reversal would be accounted for. It is more likely, however, that the excess population on the reservation in the five through 14 age range is related to school attendance and employment patterns. Many Papago off-reservation families, in which both husband and wife are employed, board children with relatives on the reservation. Many off-reservation families prefer to send their children to Indian schools rather than "integrated" schools, and board them with reservation relatives for this reason. Possible relationships between this residence pattern and better opportunity to receive Aid to Dependent Children benefits on the reservation should also be verified.

Regardless of the explanation, it appears likely that the members of this youthful population will move off the reservation in at least the same numbers as their older siblings have already done upon reaching marriage and employment age.

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Hackenberg's hypothesis that the Papago Indians represent a transitional population is in accord with these statements. No tendency toward stability was discovered in any of the characteristics of the total population examined in this survey.

The trends in residence, age composition and origin disclosed movement away from native institutions of Papago society. Since these characteristics must be considered as inter-related, the unanimity of their implications is not surprising.

The pattern of changing age composition, discussed at the beginning of the interpretation was indicative of what lay ahead. Alteration of the life expectancy of a primitive group can only be achieved through large-scale changes in living habits, movement to more sanitary shelters affording better protection from weather, improved employment opportunities, better education, and more frequent use of medical services.

Table 15. Acreage and Value of Crops Grown on Irrigated Land in 1962, Papago Reservations

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Crop	Chuichu		San Xavier				Gila Bend	
	Indian		Indian		Non-Indian		Non-Indian	
	Acres	Value	Acres	Value	Acres	Value	Acres	Value
Garden	5	$ 2,500	17	$ 8,500	31	0	0	0
Cotton	115	47,840	8	3,000	246	$ 82,900	61	$23,000
Small Grains	200	15,975	20	940	210	19,230	260	17,342
Forage & Pasture	400	16,000	0	0	0	0	0	0
Totals	740	82,315	45	12,440	487	102,130	321	40,342

Gross value of Indian crops $ 94,755
Gross value of Non-Indian crops 142,472
Gross value of all crops 237,227

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The history of irrigated farming at San Xavier and at Chuichu goes back to pre-Spanish times. The San Xavier area was described by Juan Mateo Manje, who visited there in 1697 with Father Kino:

> "Here the river runs a full flow of water, though the horses forded it without difficulty. There are good pasture and agricultural lands with a canal for irrigation. The Indians harvest corn, beans, and cotton from which they make cloth to dress themselves. Squash, melons and watermelons were also raised. We counted 800 souls in 186 houses." (Karns, p. 92)

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Subsistence farming with irrigation from stream flow continued at San Xavier until 1912 with the number of acres

Chapter IV

MANPOWER RESOURCES AND EMPLOYMENT

The Administrative Population. In the absence of an up-to-date tribal roll and of a practical definition which would identify Indians as falling under the responsibility of tribal officials and the federal administrators on the Papago reservations, it has been necessary to define an "administrative" population rather arbitrarily. 101 162

This is necessary for the reason that many Papago Indians (under our definition in Chapter II) are residents of other reservations and thus fall outside the scope of programs and services administered out of Sells. Others would not be considered eligible by reason of residence in Mexico or because they and their parents and grandparents have intermarried with other Indians or non-Indians and are thus more fully oriented toward a non-Papago reservation or toward a non-Indian community.

Taking these factors into account, we have defined the Papago administrative population to which our employment studies will refer, as follows:

1. All Papago Indians who are residents of one of the three Papago reservations, irrespective of the degree of admixture with other Indians or non-Indians.

2. All Papago Indians who are residents of communities which are outside any Indian reservation and who have at least one-quarter Papago ancestry.

The total Papago population of 11,775 (see Page 48) was thus reduced 161
to 10,195 as follows:

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Table 16. The Papago Administrative Population by Sex and Residence, 1959.

Residence	Total	Percent	Male	Female
On Papago Reservations	4,803	49.68%	2,405	2,398
In Non-Reservation Communities	4,864	50.31%	2,369	2,495
Total	9,667		4,774	4,893
Unknown Residence	528	5.18%	271	257
Total Irrespective of Residence	10,195		5,045	5,150

The administrative population is almost equally divided between reservation residence and off reservation residence with 49.7% living on the reservation, and 50.3% off. The 528 Papagos without known residence are not included 128 in these calculations. It is necessary to repeat that we have classified individuals according to "usual" residence and that this designation, in many cases, was a subjective judgement on the part of our informants.

464 171 Manpower Resources. The Papago labor force differs from the non-Indian labor force in two principal respects. The Papagos have a high percentage of individuals who are multi-employed, i.e., their income in any given year is derived from a wide variety of combinations of employment. The other difference is that the work force has a high percentage of seasonal and temporary workers, the majority of whom must be described as "underemployed."

162 463 128 In the tabulations below we have assigned multi-employed individuals to the type of employment in which they earned the largest share of their income during the 12 months period preceding our interviews. Where multi-employment income is about equally divided individuals are designated as having "mixed" 463 162 employment. Most multi-employed individuals are engaged in stock raising and

small scale farming on the reservation, in unskilled agricultural employment off the reservation, and in unskilled non-agricultural work. 463 162

Except for seasonal and temporary agricultural workers off the reservation it was not possible to secure reliable information on whether or not an individual had worked on a temporary or permanent basis. The tables, therefore, obscure the extent of the Papago work force which is temporarily employed or underemployed. Since this is an important matter in any analysis of the Papago labor force, estimates of the numbers of seasonal and temporary workers will be provided after the tables are analyzed. 464 128

We are reproducing below a sample collection of individual employment records to illustrate some of the problems encountered in coding and tabulation. 463 464 128

Case No. 1. Male. Born in 1915. Abandoned attempt to farm on reservation some years ago. Had no livestock. Formerly worked at temporary jobs in Tucson but maintained home on the reservation. Has lived in Tucson during the past 12 months and works at temporary labor jobs and as seasonal agricultural worker.

Case No. 2. Male. Born in 1911. Has reservation farm formerly worked by his father. Farm now abandoned but he still runs cattle, about 11 head. Worked for CCC in mid-1930's, later picked cotton, then worked many years in Ajo. In recent years he had a permanent job on farm near Gila Bend. During the past 12 months he has held a permanent farm job near Buckeye: irrigating, picking, chopping, tractor driving.

Case No. 3. Male. Born in 1936. Has no farm land but owns a few head of cattle. For a number of years lived on the reservation and worked as seasonal farm hand off the reservation. Left the reservation in 1956. During the past 12 months he has had permanent job as agricultural laborer around Eloy.

Case No. 4. Male. Born in 1891. Has reservation farm, no cattle. Worked most of the time off the reservation at many jobs and in many places when he was younger. In recent years has left the reservation only to pick cotton. During past 12 months has helped with work on family farm, spent a short time picking cotton off the reservation. County provides old age assistance.

Case No. 5. Male. Born in 1932. Has lived off the reservation for a number of years. Has no farm and no cattle. Spent several years working for a Tucson nursery. During past 12 months has had steady work at the Ajo mines.

Case No. 6. Male. Born in 1915. Worked for the Bureau of Indian Affairs for many years. Moved to California two years ago. During past 12 months has been employed as a plumber in California.

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464 Case No. 7. Male. Born in 1937. Has no farm land. Owns no cattle. Lives on reservation. No work experience. During past 12 months has been unemployed, living with parents.

Case No. 8. Female. Born in 1927. Father had fields, no longer used. No cattle. Worked about three months each year picking cotton, formerly received Aid to Dependent Children to take care of brothers and sisters. Now all work as cotton pickers. During past 12 months spent nine months unemployed on reservation, three months picking cotton off reservation.

Case No. 9. Female. Born in 1937. Joined WAC after leaving school. Married and living in Texas last 12 months.

Case No. 10. Female. Born in 1903. Grew up on reservation farm, father had livestock. Moved to Tucson after divorce and worked as cleaning woman and as cotton picker. During past 12 months has had steady common labor work for Tucson institution.

Case No. 11. Female. Born in 1935. Family had no fields, no cattle. Left Reservation in 1942. Attended school in Tucson and Phoenix. During last 12 months has been a University student.

162 Table 17 establishes the size of the Papago labor force and compares
463 this with the group outside the labor force. Contrary to usual practice we have
464 placed the unemployed outside the labor force since we listed as "unemployed" only
128 those people who had little or no income during the twelve months period preceding our interview. In the vast majority of cases they have either taken themselves out of the labor force or are in fact unemployable. Individuals with unearned
437 income are usually also unemployed. The relatively small sums of money earned from basket making, wood chopping, and from the sale of a few head of livestock have been disregarded in our analysis. Individuals with such incomes of course, are to be found inside and outside the labor force.

162 Agriculture on the reservation is predominantly a matter of self-
463 employment and only a few families (variously estimated at from 20 to 30) gain their
434 entire living from reservation farming and stock raising. The remaining families -- approximately 220 -- supplement their income through seasonal or temporary wage work. These are the individuals whose principal income is from reservation agriculture. Another group live on the reservation, have small farms or livestock,

but earn their principal income from off reservation wage work. A third group of small cattle owners live permanently off the reservation and leave their cattle in the care of relatives or employ someone to look after them.

Table 17. Papago Administrative Population. Labor Force Compared With Those Outside the Labor Force. Individuals 19 years and Over, 1959.

			MALE		FEMALE	
	Total	%	Number	%	Number	%
LABOR FORCE	2,535**	46.7	1,792	66.6	743	27.1
Agricultural	1,409	25.9	1,104	41.0	305	11.1
Non-Agricultural	1,126	20.7	688	25.6	438	16.0
OUTSIDE THE LABOR FORCE	1,905	35.1	407	15.1	1,498	54.7
Housewives	1,094	20.1	-	0.0	1,094*	40.0
Unearned Income	390	7.2	184	6.8	206	7.5
Unemployed	254	4.7	123	4.6	131	4.8
Students	167	3.1	100	3.7	67	2.4
EMPLOYMENT UNKNOWN	990	18.2	493	18.3	497	18.2
Total Population, 19 Years and Over	5,430	-	2,692	-	2,738	-

* An unknown number of housewives earn some income from seasonal farm work.
** An additional 47 men and two women were in the armed forces.

The 990 individuals for whom we have no data on employment are distributed by residence as follows: On reservation, 270; off the reservations in Arizona, 248; outside Arizona, 149; unknown residence, 323.

A more detailed breakdown of the labor force by type of employment and place of employment is given in Table 18, which provides most of the facts upon which an analysis of Papago manpower resources must be based. The table attempts to do three things: separate the labor force by place of employment, by agricultural and non-agricultural employment, and by level of skill.

[See table on p. 102 -- Ann Lyn]

162 (1) On reservation, 461 (18.2%), on and off reservation, 335 (13.2%),
463 and off reservation, 1,739 (68.6%).

(2) Agricultural employment, 1,409 (55.6%), non-agricultural employment, 1,015 (40.0%), and mixed employment, 111 (4.4%).

(3) Skilled and semi-skilled workers, 248* (10.0%), and unskilled 2,287 (90.0%).

As was noted above, (Table 16, Page 94) about one-half of the Papagos in our records for whom we have residence data make their usual home on the [439] reservation. The data above show that 18% of the labor force earn their principal income from on-reservation agriculture and wage work and an additional 13% earn their principal income from both on and off reservation employment. The remaining group (close to 20%) usually live on the reservation but earn their principal income off the reservation.

463 We could not make a satisfactory distinction between the skilled and
128 semi-skilled workers. In addition, we have almost surely placed some semi-skilled [115] workers in our unskilled categories. Most of our information is from neighbors or relatives of the people involved who knew that a person was employed by a construction firm or in an aircraft factory, for example, but had no knowledge of the type of work performed. In other cases, individuals were variously employed at skilled and semi-skilled work and other individuals were variously employed at semi-skilled and unskilled work. Informants gave us, in most cases, complete data on these multi-employed individuals but there is still a subjective element in both the information and the coding.

162 Approximately ten percent of the Papago labor force is engaged in
463 skilled and semi-skilled employment. These are the farm equipment operators,

[Text continues on p. 103]

*An estimated 30 individuals engaged in reservation stock raising and irrigated farming should perhaps be counted as semi-skilled or skilled. We did not make the distinction at the time and so the table shows a total of 259 unskilled workers in this category.

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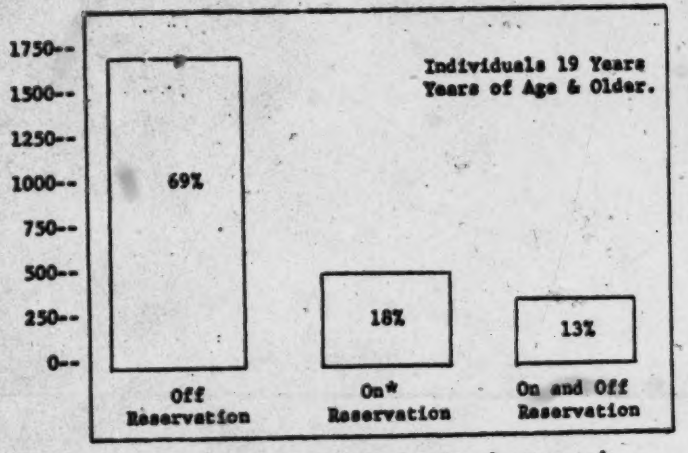
Chart 1. WHERE PAPAGOS WORK



* A high percentage of reservation farmers and stockmen leave the reservation for temporary and seasonal work.

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Chart 2. THE PAPAGO LABOR FORCE COMPARED WITH THOSE OUTSIDE THE LABOR FORCE.

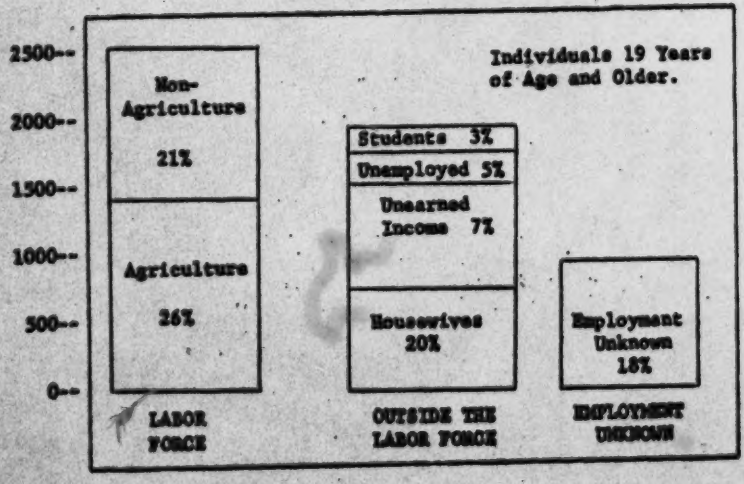
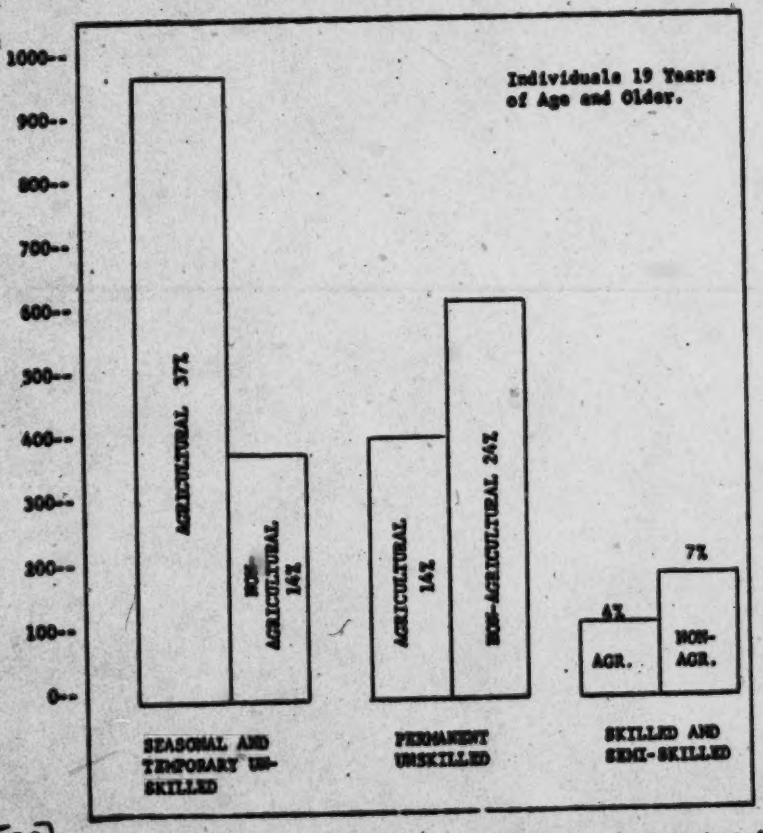


Chart 3. TYPES OF PAPAGO EMPLOYMENT *



* Data for part of this chart are estimates. We have estimated a total of 30 skilled and semi-skilled agricultural workers on the reservation and a total of 351 temporary non-agricultural workers as follows: 111 who have mixed employment and 240 who are considered temporary in our domestic and service category.

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Table 18. Papago Administrative Population Labor Force by Place and Type of Employment. Individuals 19 Years of Age and Over, 1959.

Type and Place of Employment	Total	%	MALE Number	%	FEMALE Number	%
ON RESERVATION						
Agricultural	259	10.2	258	14.4	1*	4.0
Non-Agricultural						
Skilled & Semi-Skilled	102	4.0	51	2.8	51	6.9
Unskilled	66	2.6	49	2.7	17	2.3
Mixed Employ. Unskilled	34	1.3	30	1.7	4*	4.0
ON AND OFF RESERVATION						
Agricultural Unskilled	294	11.6	283	15.8	11	1.5
Mixed Employ. Unskilled	41	1.6	32	1.8	9	1.2
OFF RESERVATION						
Agricultural	856	33.8	563	31.4	293	39.4
Skilled Permanent	69	2.7	69	3.9	0	0.0
Unskilled Permanent	365	14.4	360	20.1	5	4.0
Unskilled Seasonal	422	16.6	134	7.5	288	38.8
Non-Agricultural	847	33.4	497	27.7	350	47.1
Skilled and Semi-Skilled	77	3.0	55	3.1	22	3.0
Clerical	16	4.0	7	4.0	9	1.2
Manufacturing	13	4.0	10	4.0	3	4.0
Construction	13	4.0	13	4.0	0	0.0
Other	35	1.4	25	1.4	10	1.3
Unskilled	770	30.4	442	24.7	328	44.1
Manufacturing	57	2.2	49	2.7	8	1.1
Mining	166	6.5	166	9.3	0	0.0
Construction	52	20.5	52	2.9	0	0.0
Domestic-Service	483	19.1	165	9.2	318	42.8
Other	12	4.0	10	4.0	2	4.0
Mixed Employ. Unskilled	36	1.4	29	1.6	7	4.0
TOTAL LABOR FORCE	2535	- -	1792	70.7	743	29.3

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* Married women living on the reservation were reported as "housewives" by our informants. We did not secure information on the number who own cattle or who must have accompanied their husbands off the reservation and participated with them in seasonal farmwork, especially cotton picking.

162 463 bricklayers, nurses, secretaries, clerks, typists, truck drivers and the like. About 41 percent of the skilled and semi-skilled workers, excluding the self-employed, work on the reservation mostly for the federal agencies and the tribe. [464] Papago Indians, provided they have equal skill, are given employment preference for reservation jobs and it is obvious that they take advantage of this opportunity. Experience thus gained, is, of course, of great advantage to the individual should he desire to seek employment off the reservation.

463 555 In the process of Papago economic adjustment this group of skilled and semi-skilled workers are of special importance. These are the individuals who are up-grading their employment position; who have moved from routine clerical jobs to secretarial jobs, from cotton picking to tractor driving, and from common labor [177] to an assembly line. Their children, in most cases, are learning English at home, [868] acquiring a better education than the average and, in the end, they will constitute a large enough group of trained and educated Papagos to assume a responsible position in the development of both natural and human resources on the reservations.

162 464 From the point of view of understanding the employment picture, however, the problem of seasonal and temporary employment must be dealt with. We account for seasonal and temporary employment as follows:

Individuals with mixed employment	111
Unskilled agricultural workers on and off the reservations	294
Unskilled seasonal agricultural workers off the reservations	422
Self-employed farmers and stock raisers on the reservations who rely on supplementary wage work	229*
Off reservation wage workers in domestic and service employment. Temporary workers estimated at	240**

*Thirty of the 259 reservation agricultural workers are estimated to be employed full time.

**This group of 240 is derived from the 483 categorized as off-reservation "domestic and service" workers (See Table 18).

The total number is 1,296, at least 30% of the Papago labor force. These are the individuals who must be classified as "underemployed." They are predominantly reservation residents, and, as will be seen later, are drawn from the Papago population with little or no formal education.

The magnitude of the underemployment and unemployment problem is shown even more clearly in an analysis of Table 17.[1] Three hundred and ninety individuals are recorded as living on unearned income (mostly welfare) and 234 individuals are recorded as being unemployed (mostly unemployable). The two classes together constitute 644 and when we add these to the 1,296 who are underemployed there is a total of 1940 Papagos, 19 years of age and over, who are unemployable, unemployed, or underemployed in a total adult population of 4,440 on whom we have employment data. The percentages are as follows: Steadily employed, 28%; unemployable, unemployed, or underemployed, 44%; housewives 24%; and students 4%.

Anyone interested in the "Indian problem" knows that it is the above group of underemployed and unemployed Papagos--almost half of the adult population--who must be the subject of central attention. These are the adults who have only common labor to offer in an industrialized society which is cutting its need for common labor every day. These are the adults who cannot speak English, or handle it badly, who have had little or no formal education, and who were raised in the relative isolation of reservation communities.

It is not assumed by the Bureau of Indian Affairs or by the tribal government that time will take care of the problems of unemployment and underemployment among Indians. A number of programs--employment assistance, vocational training, adult education, community development, and social and health service programs have been established in order to give special assistance to Indians. The range and type of services, and the numbers of Indians for whom these services are made available, however, are not in proportion to the magnitude of the Papago social and economic problems as they are defined in this report.

[1] [See Table on P. 98--Analyst]

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Males Compared With Females. There are 1094 more men than women in the Papago labor force and this, of course, is accounted for by the 1094 women who are housewives. The relative distribution of women and men as between skilled and unskilled work is about the same. It is somewhat surprising, however, to find that in actual numbers there are as many skilled and semi-skilled jobs for women on the reservation as there are for men. Preferential employment of Indians on reservations obviously works to the very decided advantage of Papago women where 51 have found skilled and semi-skilled jobs as compared with only 22 in similar capacities off the reservation (see Table 18).

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As might be expected, proportionately more men than women earn their principal income from agricultural employment; 66% compared with 43%. The difference is to be found in the relatively large number of Papago women engaged in domestic service, a total of 318; about 43% of all working women.

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The Reservation Labor Force. Statistics reported in Tables 16 and 18 show that 30% of the Papagos live on the reservation most of the time but that only slightly more than 31% earn part or all of their living there. About 80% of the reservation workers are in agriculture but it is at this point that our assignment of individuals to categories indicating "major" source of income may be misleading. The 80% of Papago workers who are in agriculture earn their living, with few exceptions, from a combination of reservation and off reservation income, where as the 20% of reservation workers who have non-agricultural employment earn practically their entire income from these jobs. These are the "well to do" Papagos who work for the federal government and the tribe.

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A comparison of on and off reservation workers with those who are not in the labor force is also interesting. About 48% of the total population 19 years of age or over is in the labor force.

When the on reservation adults are separated from the off reservation adults, however, it is found that 41% of those on the reservation are in the labor

force, compared with 68% among those living off the reservation. The difference is in the number of Papagos who are unemployed or who live on unearned income: 338 with unearned income live on the reservation, compared with 32 off the reservation and 174 unemployed persons live on the reservation, compared with 80 off the reservation. 162 464

Employment and Education, Age and Origin. Among the administrative population, 19 years of age and older, 34% has had no education or has not gone beyond the fourth grade in school, 39% has had a fifth grade through eighth grade education, and 28% has had one year of high school education or more. Less than one percent has attended college and less than one percent has had formal vocational training. Comparable percentages for the United States as a whole in 1939 among individuals 18 years of age and older are: no education or less than five years, 7%, up to eight years of education, 27%, up to twelve years of education, 48%. Sixteen percent of the adult United States population has attended or completed college, (U.S. Bureau of the Census, 1939). 162 871 [171]

The Papago level of education is no surprise when the history of formal education on the reservation is known. It does come as somewhat of a surprise, however, to learn that Indians with a few more years of education find better jobs and steadier jobs than those that have had less than four years in school. The data are in Tables 19, 20, and 21. The reason can perhaps be traced to better facility in English which would be expected of the Papagos who have received an education beyond the fourth grade. The data, however, are contrary to similar information secured on the Colorado River Reservation (Kelly, 1939). Seasonal agricultural workers have a lower than average percentage of individuals who have completed the fourth grade while non-agricultural wage workers are above the average. Only seven percent of the skilled off reservation wage workers have had less than five years in school (See Table 20). 162 871 464 [191] [114]

[text continues on p. 109]

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Table 19. Papago Administrative Population by Employment and Level of Education. Individuals 19 and Over, 1959.

Type of Employment	No Education	1 to 4 yrs.	5 to 8 yrs.	9 to 12 yrs.	College	Vocational	TOTAL	No Data
ON RESERVATION								
Agriculture	44	73	91	44	2	0	254	5
Non-Agri. Wage Work	5	18	62	76	3	4	168	0
Other	11	6	10	4	0	0	31	3
Housewives	101	142	216	89	0	0	548	13
Unearned Income	152	82	94	18	0	0	346	12
Unemployed	29	36	63	43	0	1	172	2
ON AND OFF RESERVATION								
Agri. on, Seasonal Agri. Wage Work off	66	88	118	20	0	0	292	2
Other	1	10	24	6	0	0	41	0
OFF RESERVATION								
Agri. Wage Work								
Seasonal	88	136	141	50	0	0	415	7
Permanent	43	101	219	59	3	0	425	9
Non-Agri. Wage Work								
Unskilled	21	79	380	298	6	5	789	17
Skilled	1	4	.8	45	10	5	73	4
Housewives	30	83	219	171	4	2	509	24
Unearned Income	11	3	10	8	0	0	32	0
Students	0	8	24	114	7	11	164	3
Unemployed	7	18	30	21	0	0	76	4
TOTAL	610	887	1709	1066	35	28	4335	105
Unknown Employment	8	23	55	117	10	3	218	772

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Table 20. The Papago Administrative Population Percentage of Individuals at Each Level of Education by Type of Employment. 19 Years and over, 1959.

Type of Employment	No Education	1 to 4 yrs.	5 to 8 yrs.	9 to 12 yrs.	College	Vocational
ON RESERVATION	%	%	%	%	%	%
Agriculture	17.3	28.7	35.8	17.3	0.7	0
Non. Agri. Wage Work	3.0	10.7	36.9	45.2	1.8	2.4
Other	35.5	19.3	32.3	13.0	0	0
Housewives	18.4	25.9	39.4	16.2	0	0
Unearned Income	43.9	23.7	27.2	5.2	0	0
Unemployed	16.9	20.9	36.6	25.0	0	-0.6
ON AND OFF RESERVATION						
Agri. on, Seasonal						
Agri. Wage Work off	22.6	30.1	40.4	6.8	0	0
Other	2.4	24.4	38.6	14.6	0	0
OFF RESERVATION						
Agri. Wage Work						
Seasonal	21.2	32.8	34.0	12.0	0	0
Permanent	10.1	23.8	51.3	13.9	0.7	0
Non-Agri. Wage Work						
Unskilled	2.7	10.0	48.2	37.8	0.8	0.6
Skilled	1.4	3.5	11.0	61.6	13.7	6.8
Housewives	3.9	16.3	43.0	33.6	0.8	0.4
Unearned Income	34.4	9.4	31.2	25.0	0	0
Students	0	4.9	14.6	69.6	4.3	6.7
Unemployed	9.2	23.7	39.5	27.6	0	0
TOTAL	14.1	20.3	39.4	24.6	0.8	0.6

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Similar correlations between education and employment apply to workers who have had at least one year in high school. The proportion for the entire administrative population, 19 years of age and older, is 28%. The proportion for on-reservation wage workers is 49%, for unskilled off-reservation wage workers it is 39% and for skilled off-reservation wage workers it is more than 61%.

Papagos who work off the reservation at more or less full time jobs are better educated than those who work on the reservation. The comparative percentages are in table 21.

Table 21. Papago Administrative Population by Place of Employment and Education. Individuals 19 and over, 1959.

Place of Employment	No Education	1-4 Years	5-8 Years	9-12 Years	College	Vocational
On Reservation						
Agricultural	17.3	28.7	35.8	17.3	0.7	0.0
Non-Agricultural	3.0	10.7	36.9	45.2	1.8	2.4
On & Off Reservation						
Agricultural	22.6	30.1	40.4	6.8	0.0	0.0
Off Reservation						
Agricultural						
Seasonal	21.2	32.8	34.0	12.0	0.0	0.0
Permanent	10.1	23.8	51.5	13.9	0.7	0.0
Non-Agricultural						
Unskilled	2.7	10.0	48.2	37.8	0.8	0.6
Skilled	1.4	5.3	11.0	61.6	13.7	6.8

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The differences in level of education between men and women is very slight and for various categories of employment the numbers involved are too small to have any great significance. Men in off-reservation skilled work are, on the whole, better educated than women in the same category with 84% of the men and 78% of the women having better than a ninth grade education. The numbers involved are 42 and 18 respectively. Housewives are better educated than the average

Papago women and this is probably due, as might be expected, to the lack of education found among the women who must support themselves or help support their families in seasonal agricultural work. Women engaged in non-agricultural wage work, which includes the women who work as domestics, are the best educated.

Employment and Age. The significant age differences in employment are given in Table 22. Contrary to heretofore inconclusive evidence, Papagos under forty hold more jobs in off-reservation wage work (agriculture and non-agriculture) in proportion to their numbers than do the older men. The unemployed, however, are definitely younger men: 6.3% as compared to 4.0%. Unearned income (usually welfare) goes to the older people, 17.6% as against 2.4%. There is little or no sex difference in this category.

There is a very high proportion of Papagos over 65 who are receiving unearned income (usually Old Age Assistance): 204 out of a total of 343 (57%).

Table 22. Papago Administrative Population Employment by Age. Individuals 19 Years and Over, 1959.

Type of Employment or Income	Under Forty			Over Forty		
	Total	Number	%	Total	Number	%
Reservation Agriculture	2540	115	4.5	1907	155	8.1
Reservation Wage Work	2540	72	2.8	1907	46	2.4
Off Reservation Wages	2540	1065	41.9	1907	634	33.2
Unemployed	2540	160	6.3	1907	77	4.0
Unearned Income	2540	60	2.4	1907	335	17.6

Employment and Origin. In addition to a low average education, the Papago labor force has the added disadvantage of little or no childhood experience in areas where young people normally have a wide variety of jobs. Approximately 86% of the present Papago labor force originated on the three reservations where opportunities for earning money at odd jobs are practically non-existent. Boys and girls on the reservations, of course, help their families in the home and on

162 464 868 the farm or range, but this is far different from the training received when young people work for strangers. The 14% that originated off the reservation reflect this, and other advantages in the nature of the jobs they hold (see table 23). [463] They have 18% of the permanent agricultural jobs, 19% of unskilled wage work and 37% of the skilled wage work.

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Table 23. Papago Administrative Population. Comparison of Types of Employment by Origin. Individuals 19 and Over, 1959.

Types of Employment	Origin On Reservation Number	Origin On Reservation Percent	Origin Off Reservation Number	Origin Off Reservation Percent
ON RESERVATION				
Agricultural	273	96%	11	4%
Non-Agricultural Wage Work	152	91	15	9
Other	32	94	2	6
Housewives	511	93	37	7
Unearned Income	306	95	15	5
Unemployed	171	98	3	2
ON AND OFF RESERVATION				
Agriculture on, Seasonal Agric. Wage Work off	287	98	7	2
Other	41	100	0	
OFF RESERVATION				
Agricultural Wage Work				
Seasonal	381	92	33	8
Permanent	353	82	76	18
Non-Agricultural Wage Work				
Unskilled	645	81	151	19
Skilled	47	63	28	37
Housewives	376	72	150	28
Unearned Income	21	72	8	28
Students	117	71	48	29
Unemployed	57	71	23	29
TOTAL	3770	86	607	14

Total with origin unknown 64. Total with employment unknown 495. Total with both origin and employment unknown 395.

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Papago Agricultural Workers in Pima County. Agricultural work off the reservation is of such great importance to Papago family economics that we felt it necessary to make a special study of this subject. The project was planned and executed in 1961 by Mr. Harland Padfield, a Department of Anthropology graduate student who is an authority on this subject. Unfortunately, the study was limited to Pima County since funds did not permit the extension of the research to other sections of southern Arizona.

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Mr. Padfield was able to establish two points: (1) Papago Indians in farm work are shifting to other jobs than seasonal cotton picking and are not being displaced because of mechanization, (2) they account for 30 percent of the total man-hour input and 27 percent of the total wage input on Pima County farms and receive total annual earnings of about $630,000. The evidence, although not conclusive, also indicates that there is a steady increase in the training and use of Papagos in the operation of farm machinery and in other skilled jobs.

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The author concludes his report with the following words: "These data should make it patently clear that with the Papago Reservation virtually surrounded by 370,000 acres of farm land needing a labor force in excess of 10,000 workers and a labor expenditure probably in excess of $13,000,000 annually, programs and policies aimed at the problem of Papago economics cannot ignore farm labor; neither can programs and policies aimed at the problem of farm labor ignore the Papago Indians."

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Padfield's work was based upon an area sample which permitted him to generalize from detailed interviews with 21 of the 119 farm operators in Pima County with a total acreage of 29,796 out of 66,875. Data thus collected was supplemented through interviews with crew leaders who recruited the seasonal workers, mostly cotton pickers, for the farms drawn in the sample.

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The author's summary of findings will be found in Table 24 where he analyses his sample in terms of Papago man hours of farm work compared with other workers; in Table 25 where man hours are given in percentages; and in Table 26 where earnings, calculated for the sample, are projected to the total amounts earned by all farm workers in Pima County.

An interesting distinction is made between temporary farm work and seasonal farm work. This was possible because farmers keep their own records on temporary employees who are hired for many types of jobs during the year. Seasonal workers, on the other hand, are hired by labor contractors (crew leaders) to take care of peak periods of farm labor demand.

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Table 24. Number of Workers, Man-Hours, and Earnings by Category of Work and Ethnic Affiliation from a Sample of Pima County Farms.

Work Categories		Non-Indian Amount	Papago Only Amount	Other Indian Amount	All Workers Amount
Direct permanent full time	No. workers*	164	41	8	213
	Total man-hrs.	492,000	107,004	20,880	619,884
	Total wages	$551,040	$121,764	$23,760	$696,564
Direct Temporary part time	No. workers*	64	227	9	300
	Total man-hrs.	46,126	111,330	7,200	164,856
	Total wages	$ 34,594	$ 83,647	$ 5,400	$123,641
Indirect crew leaders' crews	No. workers*	261	146	138	565
	Total man-hrs.	133,377	116,220	89,100	338,697
	Total wages	$ 86,695	$ 75,543	$57,915	$220,153
All Work Activities	No. workers*	489	414	175	1,078
	Total man-hrs.	671,503	334,754	117,180	1,123,437
	Total wages	$672,329	$280,954	$87,075	$1,040,358

*These worker figures do not represent discrete units, except in one category--"Direct Permanent." For the other two categories they represent contacts with actual persons, who may or may not have been recalled by name, which were recorded primarily for the purpose of facilitating the informants' and investigators' computation of man-hours which do represent discrete units.

[P. 113]

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Table 25. Percentage of Total Man-Hours by Category of Work and Ethnic Affiliation of Workers from a Sample of Pima County Farms.

	Non-Indian	Papago Only	Other Indian	All Workers
Direct Permanent	79.3%	17.3%	3.4%	100%
Direct Temporary	28.0	67.6	4.4	100
Indirect	39.4	34.3	26.3	100
All Work Activities	59.8	29.8	10.4	100

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Table 26. Projection of Sample Findings as an Estimate of Total Income from Farm Work in Pima County by Ethnic Affiliation of Workers*

Work Categories	Non-Indian	Papago Only	Other Indian	All Workers
Direct Permanent Full Time	$1,238,292	$273,627	$53,393	$1,565,312
Direct Temporary Part Time	77,739	187,971	12,135	277,845
Indirect Crew Leaders Crews	194,820	169,760	130,146	494,726
All Work Activities	1,510,852	631,358	195,674	2,337,883

* Projections for the entire county were calculated by dividing the item--wages in this case--by ".445" the fraction of total county acreage (66,675) that the acreage of the sample farms (29,796) comprised. Average wage for permanent workers was $1.00 per hour plus about $30 per month in other benefits, for direct temporary workers it was 75¢ per hour and for indirect workers it was 65¢ per hour.

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464 Changes in Papago Job Participation. With reference to Table 24, Padfield points out that Papago participation in Pima County farm work is roughly equal in all categories--107,004 man-hours in "direct permanent", 111,530 man-hours in "direct temporary", and 116,220 man-hours in "indirect" (i.e., seasonal labor contracted by crew leaders). The following discussion of this point and other data developed by Mr. Padfield are taken directly from his final report.

From all accounts traditional Papago off-reservation work in the past has been seasonal work, chiefly in cotton (Dobyns, 1950). In 1961, Papagos supplied not only a significant (one-third) proportion of all farm work in the county, but two-thirds of this large proportion of work in 1961 was not seasonal--admittedly not altogether permanent, but not seasonal. Thus either these earlier [114] impressions are erroneous or there has been a marked trend toward more permanent and/or more highly skilled farm jobs in the past ten years.

The growers themselves tend to support this inference in that over half of the 21 comprising the sample said that they were using Indians in more skilled jobs, with only one grower saying that he was using them in less skilled jobs.

The individual employment records of 43 Papagos also tend to support this inference in that 32 percent of them show an advancement in job skills with the rest showing no change either way.

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463 The Status of Hand Labor. Our data (Table 24) indicate that seasonal
464 hand labor still accounts for one-third of all the man-hours of farm work in Pima
[114] County. This leads us to question the assumption that agricultural hand labor will shortly be a thing of the past, and that Indians depending on income from hand labor are ipso facto displaced workers. This phenomenon is far more complicated than that.

463 In the first place, seasonal hand work is by no means all the hand labor
464 expanded on farms. Much of all crop production activity is still hand--irrigating

657 There are five welfare categories, Old Age Assistance, Aid to Dependent Children, Aid to the Blind (all administered by the state welfare office), Child Welfare and General Assistance (administered by the Bureau of Indian Affairs). In addition, everyone eligible for assistance in the above categories, plus those of minimum income, are eligible for surplus food under the Surplus Commodities Program (a state agency).

● 162 657 By 1962, according to Jones, the number of reservation welfare cases had jumped from 448 to 536, not counting an estimated fifteen children receiving Child Welfare benefits and 170 heads of households receiving surplus food. Counting dependents this means that more than 1800 residents out of a total of about 3000 on the three Papago reservations are receiving some assistance, directly or indirectly, from welfare programs.

162 657 178 [115] [586] [848] [164] [165] [586] Welfare statistics pertaining to the Papago reservations are given in Table 27. Trends for fiscal years 1958 through 1962 indicate a gradual increase in Aid to Dependent Children cases. This has been noted also for the non-Indian population as a whole. An opinion with respect to the reason for this was provided by Pima County welfare officials. More women and children tend to return to the reservation, or remain there. More women are finding out about ADC grants. In addition, there is a national increase, as well as a local increase, in divorce. There is also an increase in illegitimacy. The primary cause for the condition that makes a woman and her children eligible for A.D.C., however, is the death, disability or desertion of the father. On the reservations death claims 25% of such cases, disability 22%, and desertion about 19% of the total.

162 171 657 Given the nature of Papago family economy, the results of a comparison with the non-Indian population of Pima County are not particularly surprising. For 1961 the non-Indian population of the county was estimated to be 48 times as large as the reservation Indian population. Using the population ratio of 1 to 48

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Table 27. Welfare Cases and Payments to Papago Reservation Residents, Fiscal Years 1958 through 1962. (Source: State and Federal welfare statistical reports).

Category	Average Monthly Cases	Average Monthly Payments	Estimated Annual Payments
1958			
Old Age Assistance	273	$14,884	
Aid Dependent Children	102	9,331	
Aid to the Blind	9	603	
General Assistance	72	3,710	
Child Welfare	17	993	
Total	473	29,521	$354,252
1959			
Old Age Assistance	266	15,133	
Aid Dependent Children	102	9,644	
Aid to the Blind	7	482	
General Assistance	73	4,218	
Child Welfare	17	999	
Total	465	30,476	365,736
1960			
Old Age Assistance	255	16,161	
Aid Dependent Children	119	12,636	
Aid to the Blind	8	545	
General Assistance	70	4,489	
Child Welfare	8	810	
Total	460	34,661	415,932
1961			
Old Age Assistance	257	15,801	
Aid Dependent Children	135	14,540	
Aid to the Blind	9	594	
General Assistance	87	5,499	
Child Welfare	12	949	
Total	500	37,383	448,596
1962			
Old Age Assistance	266	16,191	
Aid Dependent Children	154	16,680	
Aid to the Blind	12	613	
General Assistance	104	4,624	
Child Welfare	n.a.	1,375	
Total	536+	39,483	473,796

162 as a basis for comparison, ADC cases occur in the ratio 1 to 6, OAA cases occur
657 in the ratio 1 to 7 and Aid to the Blind cases occur in the ratio 1 to 10.
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The data given above reveal quite clearly the "vulnerable" situation
511 of most Papago families and the depressed economic conditions on the reservations.
657 The welfare picture, however, is not quite as bad as it appears to be. Indians
829 look upon their reservations as a place of security and support--not only in terms of the assistance rendered through federal agencies, but also the security and support that can be expected from kinsmen and neighbors in an Indian community.
[162] Indians in trouble return to the reservations and this is undoubtedly the reason why Jones found 465 individuals receiving welfare payments on the reservations in 1939 and we found only 32 such cases among Papagos living off the reservations.

128 Employment and Income on the Papago Reservations. Information on resi-
162 dence and place of employment as given in this report indicates how difficult it
434 would be to study a "reservation population" apart from a "tribal population." It has been shown that family movement on and off the reservations is a constant process and that the annual earnings of 350 adults, at the very least, are from sources both on and off the reservation. Another group of about 450 adults (not counting the unemployed and housewives) are recorded as having their "usual" home on the reservations but live on income from temporary and seasonal wage work on the outside.

128 Patterns of Papago employment and the many and varied sources of income
434 pose major problems in any attempt to learn the sum of Papago earnings family by family. Even in a sample survey, where the employment and earnings of a small number of families could be studied intensively, the findings would be less than precise for the hundreds of families who are multi-employed, irregularly employed,

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Table 28. Income of Papago Indians Employed on the Main Reservation and at the San Xavier Hospital and Mission during Fiscal Year 1963.

Employer	No. Papago Employed Permanent	Temporary	Annual Income
Bureau of Indian Affairs	67 *	34	$327,872 65,104
Public Health Service	49	2	218,858 1,799
Papago Tribe	13	3	30,289 497
Kitt Peak Observatory	4	24	18,221 58,982
Catholic schools-missions	18	1	20,012 1,000
Reservation Traders	12	4	25,931 4,411
Reservation Restaurants	6		8,944
Reservation Gas Stations	4		8,580
Reservation Cattle Buyers	3		7,051
State Highway Department	2		10,379
Sells Post Office	1		674
Protestant Missions	2		660
Total	181	68	$809,264
Special 1963 Federal Works Project			301,498 **
Total for Fiscal 1963			$1,110,762

* Individuals in this column are employed on a year round basis but not necessarily full time.

**This is a non-recurring item, undoubtedly absorbed some workers who would have found work elsewhere, and will not be included in our calculations of annual reservation income.

By referring to Table 18 (page 102) the individuals who received income from these sources in 1959 may be identified by categories. It may be assumed that the numbers of individuals involved, as the amount of income, from farming, and stock raising have remained about the same. The number of permanent and temporary wage workers has gone up from 202 to 249 and the number of welfare clients has increased from 463 to about 550.

The numbers of individuals involved in the above categories in 1962 are thus: reservation farming and stock raising 259, reservation wage work 249 and welfare income 550.

We do not know the amount of agricultural income received by the 259 adults whose principal income was from this source since large numbers of cattle are owned by Papagos who work off the reservation. Neither do we know the amount earned by these 259 individuals from seasonal and temporary wage work. Perhaps the two about balance each other. Taking this as our assumption we have the following result.

Average annual income of adults engaged in stock raising, farming, and some temporary wage work is calculated at $2509 (259/$650,000). Average annual income of all reservation wage workers is $3250 (249/$809,264). Average annual income of "permanent" reservation wage workers is $3742 (181/$677,471). Average annual income of welfare recipients (individuals receiving payment and not including dependents) is $861 (550/$473,796).

We have thus accounted for 1058 of the 2596 individuals 19 years of age and older who make their usual home on the three Papago reservations. The remaining 1538 are distributed as follows: 735 are housewives or unemployed, 335 are part time farmers and stock raisers on the reservation and part time wage workers off the reservations and 468 secure all their income from seasonal and temporary wage work off the reservations. We know what these people do, but we are unable to calculate their income since there is no way of determining the average number of days or weeks they are actually employed during the year.

of days or weeks they are actually employed during the year. Average annual earnings for this group of 803 individuals would probably be located somewhere between the average income of welfare recipients ($861) and the individuals engaged principally in reservation farming and stock raising ($2509).

Only a sample survey, now made possible by the existence of a Papago population register, could determine more precisely the annual income of Papago adults, or Papago families. The answer, whatever it might be, would add little to our knowledge. We know the nature of Papago employment, we know the approximate numbers of individuals in each of the categories of employment, and we know the magnitude of the problems of unemployment, underemployment, and dependence upon welfare. To know the dimensions of a problem, however, is only the beginning. This must be followed by an examination of the facts which may lead to a solution. A great deal, but by no means all, of the necessary information is contained in this report. The task of analysis, however, must be deferred at this time except for certain more obvious considerations which are treated below.

Conclusion. The outstanding fact, and this runs as a thread through all our statistics, is that the Papago Indians are solving their own problems. Starting from very nearly "zero" in 1917, when the Sells Reservation was established, the Papagos have shown great skill and persistence in finding ways to remain self-supporting in the face of meager resources and a rapidly changing world around them. They have done more than this. A substantial number--more than 300--Papago boys and girls have secured an education and have moved into productive employment as skilled and semi-skilled workers. Another substantial group, about 38% of all adults, have found permanent and near permanent employment on and off the reservation in spite of language, cultural, and educational handicaps.

The trend of events is clearly discernible in our material. Papago families remain on the reservations, taking advantage of all possible income

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psychological base in cooperative family life, with roots in the traditional homeland to counterbalance the wage work cycle is of vital importance to Papago well-being as a firm pivot around which the individual may build his new adjustment to rapidly changing modern conditions. As such, the new dual orientation may well serve as the focus of administrative planning.[1]

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However, an increasing proportion of the Desert People who work on cotton farms no longer make an annual migration from reservation home to labor camp. They have moved from the reserves more or less permanently, consciously recognizing themselves as permanent farm workers. Mostly they are irrigators, but do general farm work, and include tractor drivers and other skilled workmen. They contribute some labor to harvesting cotton, since men pick when regular jobs are slack, and wives and children pick off and on. These people made up over a fifth of the Papagos interviewed in the course of this study,[2] indicating that the number of Papagos living on farms outside the reserves all the time is relatively large, perhaps as many as 800.[3] They occupy an important place in the labor picture and economy of the cotton-growing valleys. Their ability to support themselves by wage labor is very important to the economy of the reserves, removing part of the population overload that cannot be supported adequately by the poor lands of the reserves.

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This form of adjustment to a radically changed economy has not progressed to its ultimate, however. In South Africa, where European settlers moved in and confined the natives to similar reserves, about 35% of the native population lives permanently on European owned farms.[4] If 800 Papagos live on southern Arizona farms all the time, only about 10% of the population is living on European owned farms outside the reserves. (Perhaps as many live in southern Arizona cities.)

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[1] Thompson, 1951, p. 71.
[2] 12 of 55 families, or 22.6%.
[3] About 2,000 Papagos picked cotton in 1950, and about 4,500 lived in labor camps. So approximately 200 Papago men may be working as year-round farm laboerers, and their wives add another 200 part-time cotton pickers. Their families are somewhat smaller than those of pickers migrating from the reserves.
[4] Hunter, 1937, p. 389.

HOW the Papago Indians Work

THE FAMILY -

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The approximately 2,000 Desert People who move out into the cotton fields from their reserves to work do not move alone. The family--father, mother and children--moves as a unit.

> "It should be emphasized that, although a larger percentage of his income is obtained from work off the reservation, the Papago wage worker is not generally a footloose migratory laborer according to the usual pattern in the United States. The Papago laborer usually takes his family with him and maintains his home on the reservation."[1]

(162) The Papago family living in Pinal and Pima county labor camps in 1950 averaged some 4⅓ persons,[2] making the total number of Desert People living in labor camps at the peak of the cotton harvesting season in the neighborhood of 4,500.

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The usual Papago family in a labor camp included a father and mother and two or three children. Families with children had 3 oftener than 2.[3] About 60% of the Papago families working in the cotton fields brought school children with them from the reserves.[4] What this meant to public schools in the trading centers of the cotton growing area may be deduced from the fact that families with school-age children had on the average 1.6 such offspring to be taught in the schools.[5] If both father and mother work, this means school authorities in the cotton-growing areas of Pima and Pinal counties should expect to provide educational facilities for .8 Papago school children for approximately 60% of the total number of Papago harvesters.

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[1] Thompson, 1951, p. 71.
[2] 247 families had 208 persons, an average of 4.43 individuals in each family. (Actually these families included some additional persons not enumerated.)
[3] 28 families with children had 64, averaging 2.8857.
[4] Of 31 families giving information, 18 brought school-age children to the camps, or 58.1%.
[5] The 18 families brought 29 school-age children.

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171 This Papago family including parents and sometimes another adult, with 2 or 3 children is a comparatively smaller unit than native families living on European owned South African farms, for example. There Dutch and English settlers also moved into native held lands, and a class of permanent native farm laborers has grown up. Their average household includes slightly more than 3
596 adults, and 5 children.[1] This is about the size
592 of the Papago extended family living as a household on the reserves. "Most often, and ideally, a household consists of the old parents, unmarried sons and daughters, and married sons with their wives and children--three generations in all."[2] It reflects the fact that living on European operated farms is new to the Desert People, a move accomplished by biological family units in the younger age groups.
[177] Only recently as younger Papagos have gone to school and learned white ways have they begun to set up separate households away from their parents.

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172 Families with school-age children are the largest in the labor camps. The average family size for families with school-age offspring only is over 6.[3] The families with both school and pre-school children averaged over 7 individuals.[4] This probably reflects
[165] the high mortality rate of smaller children among the Desert People, whose new-born babies have a life expectancy of only 17 years.[5]

Families with younger parents and all pre-school age children are, of course, smaller, running some 4 individuals, with nearly 2 children per family.[6]

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178 Migration to the cotton fields reinforces the tendency to break up the old Papago extended family into smaller units like our biological family households. This change is most complete among families living in labor camps all the time, having severed their reservation ties more or less completely.

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[1] Hunter, 1937, p. 391.
[2] Joseph, Spicer & Chesky, 1949, p. 45.
[3] 10 families interviewed with 19 school children, 6.6.
[4] 8 families with 10 school children, 1.25 average, and 14 pre-school, 1.75 average, had 57 persons, 7.125 average, plus.
[5] 8 families with 15 children under 6 had 52 plus people.
[6] Secretary of the Interior, 1949, p. 12.

000 In Pinal county the average size of farms from which ethnic data was secured is only 8 acres larger than the average for all farms studied, suggesting they are reasonably representative. However, it appears embarrassingly probable that due to the smallness of the sample and the author's proclivity for finding Indian laborers, the sample was not random, and was weighted with too many Indians to be accurate.

ETHNIC DATA SAMPLE

County	Farms	Acres Average A. per farm	Percent of county	Pickers	Average per farm	Average A. per picker	Percent pickers are of county average
Pima	22	3,461½ 157.3	25.45%	678	30.9	5.1	23.68%
Pinal	27	10,405½ 385.3	7.75	1,829	45.5	8.5	7.26%

With these warnings in mind, the reader may proceed to the discussion of ethnic characteristics of the 1950 cotton picking force.

PIMA COUNTY

Mexican-Americans and braceros (citizens of Mexico working in the U. S.) could roll up a substantial plurality if a vote were taken on, say, relative popularity of foremen. About two-fifths of the Pima county picking force in 1950 spoke Spanish.[1] Another quarter of the hands in the county belonged to that group of people labeled by custom in this country as Negroes.[2] Another fifth of the Pima county laborers were Indians. The Papagos were the most numerous by far--1 picker out of each 5 to 6 in the county was Papago.[3] Reflecting the concentration of Yaquis at Pascua Village and Barrio Libre on the outskirts of Tucson, and at the old company labor camp at Marana, Indians other than Papagos made up about a fiftieth of the pickers in the county.[4]

[164] [162]

[1] Based on 678 hands of known ethnic origin of whom 290 or 42.8% were Spanish-speakers.
[2] Based on 678 hands, of whom 189 or 27.9% were Negroes.
[3] Based on 678 hands, of whom 121 or 18.9% were Papagos.
[4] Based on 678 hands, of whom 23 or 3.4% were non-Papago Indians.

000 All these groups are minorities within wider American society. They contributed about 9 of every 10 cotton pickers in Pima county in 1950. They added up to a clear numerical majority over Anglo-American harvesters, farmers, and businessmen in the rural farm areas--but the Anglos retained all their dominant social and economic position. Anglo harvesters were less than half as numerous as the smallest non-Anglo picking group in the county, the Indians.[1]

PINAL COUNTY

The ethnic picture in Pinal county looks quite different. There Anglos have a slight edge over Spanish-speaking cotton pickers, with each group making up just over three-fourths of the total labor force.[2] This meant that minority groups probably comprised a majority of the inhabitants of the Pinal farming areas during the 1950 harvest season, but their numerical dominance was not nearly so great as in Pima county.

Negroes were somewhat more than half as numerous as Anglos and Spanish-speakers in Pinal county.[3] Papago Indians were the least numerous ethnic group among Pinal county pickers. The tribe vied with Negroes according to data of this study,[4] but the smallness of the sample obtained and the great likelihood that it contained proportionately too many Papagos suggests the actual number of Papagos in the county is perhaps one-tenth of the whole picking force.[5] Indians of other tribes were an almost negligible quantity in Pinal county, only about 1 picker out of 100 being a non-Papago Indian.[6]

[464] [162]

PAPAGOS

464 125 Because of shortcomings of the sample from which the proportions of the four ethnic groups were derived, it would be well to have another basis for estimating the number of Papagos picking cotton in 1950. This can be done with other data gathered in this study.

It was possible to find out the number of Papagos employed on a good many farms where it was not possible to obtain an ethnic breakdown of the whole picking crew.

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[1] Based on 678 hands, of whom 55 or 8.1% were Anglos.
[2] Based on 1229 hands of known ethnic group, of whom 400 or 32.6% were Anglos; 383 or 31.2% were Spanish-speaking.
[3] Based on 1229 hands; of whom 217 or 17.7% were Negroes.
[4] Based on 1229 hands; of whom 211 or 17.2% were Papagos.
[5] Based on 1229 hands, of whom 18 or 1% were Indians of tribes other than Papago.

464 For this reason, 471 Papagos were found at work in the
162 cotton fields. Some other farms were found to employ
125 Papagos, but numbers could not be ascertained. At any rate, the 471 Desert People were 8.85% of all 5,319 pickers counted in this study. This may be accepted as a valid minimum proportion, since it does not include some farms where Papagos worked where the total number of pickers was obtained, but not the number of Papagos. A total of 536 Indians of all tribes were found on this same basis among 5,319 pickers counted in this study, or 10.1%. Correcting the propotion to allow for the unknown numbers of Papagos at work might mean 10% of the pickers actually were Desert People, with all Indians making up 12% or 13%.

464 The validity of this guess may be checked. In
162 Appendix I it was estimated Pima county hired 9,858 pick-
128 ers, of which number 10% is 986 Papagos. The 121 Papagos in the ethnic sample in Pima county worked on 13 farms, which were 61.9% of Pima county farms hiring Desert People. If other farms hired proportionate numbers, 186 were hired on farms studied. These included 70% of the Pima county cotton planting, so all farms in the county planting cotton should have hired some 280 Papagos. This is within 6 of the 286 figure (10% of the estimated total of pickers) so the two estimates are very close, indicating accuracy.

464 NUMBER OF PAPAGO COTTON PICKERS, 1950
162

		Papago pickers (8.85%)	Papagos off-res. (x 2.3)	Papago pickers (10%)	Off-res. pickers reserva.
361	Pickers needed per day to harvest Pinal-Pima county crop in 96 days	16,095	1,424	3,275	1,618 3,703
	Average number of pickers hired per day, Oct.-Dec. (ASES data)	19,251	1,704	3,919	1,925 4,428
	Average pickers hired per day Oct.-Dec. (Data of this study)	19,764	1,748	4,025	1,976 4,545
	Peak number of pickers hired per day in any week. (ASES data)	22,140	1,959	4,496	2,214 5,092

On the basis of these figures it seems safe to say at least 1,700 Papagos picked cotton in 1950. And this meant some 2,750 Desert People lived in farm labor camps off their reservations. But the most likely estimate appears to be approximately 2,000 Papagos harvested cotton and about 4,500 in all lived in labor camps in Pima and Pinal counties in 1950.

[136 contains no textual material]

3: Whited G-5 (1890) 1894 NT15 River Yumans
Papago NU28

311 In the spring of 1890 the land was allotted to the Indians in severalty, and it may now be divided as to quality as follows:

	Acres.
Land that is farmed	500
Land that is not now farmed on account of deficient water supply	1,500
Timbered land allotted	5,000
Mesa land, suitable for pasturage, allotted	20,000
Mountain land, including desert land that can be pastured 2 months in the year	20,000

The 1,500 acres not farmed on account of deficient water supply may be farmed when a better and more economical mode of irrigation is adopted than that now practiced by the Indians. The 5,000 acres of timbered land is what is usually called mesquite land, from which the Papagos procure their fuel and sell considerable quantities from year to year. The 20,000 acres of mountain land is next to worthless.

There are 94 heads of families on the reservation, and a little more than 5 acres of farming land (land that is farmed) are allotted to each head of a family. The 500 acres of allotted land are surveyed and staked out. The area of land cultivated is diminished, and no progress is being made in methods of farming. Most of their income seemed to be obtained from the sale of wood and hay cut on the reservation.

[434]

AGRICULTURAL PRODUCTS RAISED AND STOCK OWNED BY INDIANS FOR 1889-1890.

PRODUCTS, STOCK, AND LAND.	Number.	Value.
Total value of agricultural products		$6,170
Bushels of barley	4,000	3,000
Bushels of corn	1,200	1,000
Bushels of vegetables	1,000	1,000
Melons	200	20
Pumpkins	1,000	150
Tons of hay cut	200	1,000
Total value of live stock		4,125
Horses owned by Indians	200	3,000
Cattle owned by Indians	150	1,000
Domestic fowls owned by Indians	250	25
Acres under fence	14,000	
Pence made during year (rods)	7,000	

241

231

342 493 291 797 All of the Papago Indians living on reservations are in a village near San Xavier church. Their dwellings are mostly rude adobe, with dirt roofs and few windows, and are almost destitute of furniture except the most primitive. There are only 14 comfortable adobe houses. Many of the Indians own farm wagons, though their farming tools are rude and unserviceable. The men all wear the civilized dress; the women also wear dresses similar to those worn by the whites, but leave off their shoes on ordinary occasions. It is claimed that 230 of the Indians living on the reservation are members of the Catholic church.

STATISTICS OF THE RESERVATION PAPAGOS.

Whole number living on the reservation		362
Males	181	
Females	179	
Children under 1 year of age		32
Males	21	
Females	11	
Number married		120
Number over 30 years of age who can read		10
Number who can read and write		10
Number who can use English enough for ordinary conversation		20
Number of children of school age		85

162

658 797 SCHOOLS.—The Catholic church has provided 2 neat, well-furnished schoolrooms adjoining San Xavier church, which will accommodate about 70 pupils. A school was maintained there during the year 1889 by the Sisters of the order of Saint Joseph, without pecuniary aid from the United States. The average attendance for the year ending June 30, 1890, was about 20. In addition to elementary studies the girls were taught sewing, crocheting, knitting, and minor household duties. A few of them became quite skillful in operating the sewing machine. The great drawback to the prosperity of the school was the irregularity in attendance. The school was again opened in September, 1890.

3: Whited G-5 (1890) 1894 NT15 River Yumans
Papago NU29

The Papagos are not addicted to
273 276 525 intoxicating drink, but smoking and gambling are so common among them that they will even stake their clothing on races, either by men or horses, and on the simple games with which they are familiar.

771 797 RELIGION.—The Papagos are nominally Catholics. Adults and children wear crosses and charms. They believe in witches and evil spirits, and buy charms to insure good luck.

At the little village of Ki-ki-wah, where there are a number of returned scholars, it was said that a simple service was held by these "graduates", in which they explained on Sundays the things they had learned about the white man's religion. At the village called Gunsight 2 Mormons have been living among the Indians for nearly 2 years.

191 181 192 871 EDUCATION.—The Papago youth of both sexes show considerable capacity for mental culture. Many of the Papagos speak Spanish fluently, even after having been at school for 2 or 3 years. When at home on their vacations they only hear Papago and Spanish, which tends to the disuse of what English they have acquired. They are docile, mild in disposition, and well inclined toward their teachers. They learn slowly but surely. The chief difficulty of receiving any permanent benefit from educating them is that they are so disastrously affected by the conditions which meet them when they return to their homes. They virtually return to barbarism and all old influences of a nonprogressive character.

The boys readily learn improved methods of agriculture, also the trades of tinsmith, blacksmith, and carpenter, while the girls learn sewing, cooking, and the general duties of housekeeping.

658 797 SCHOOL ATTENDANCE.—During the 3 years of the Tucson Presbyterian mission school 73 Papago children have been enrolled. There are 30 now on the rolls. The number enrolled at the San Xavier reservation schools is about 20. At Sacaton there are 15 Papagos on the roll. The government school there is well conducted.

162 It will be seen that in the district visited, with the addition of the Papago scholars at San Xavier, not more than 100 in all of these children are in school. The total number of Papago children of school age is probably about 2,000. Their parents will exercise no authority to secure their attendance at school even when they wish them to go, nor, on the other hand, do they hinder them if they desire an education.

164 [755] PATHOLOGICAL.—The Papagos are very liable to consumption and pneumonia. This arises from the exposure to which they are subject in inclement weather, as all mud roofs leak in protracted rains and a pitch sufficient to carry off the rain would cause the adobe itself to wash off entirely. Many of the tribe are pitted badly with smallpox. Children are subject to measles and whooping cough in addition to lung difficulties. The Papagos have no medical treatment whatever among themselves, and in case of sickness resort to the "medicine man" with his mummeries.

752 152 The Indians seem to be able to deal with flesh injuries, but are powerless in cases of disease or fractures of bones. In acute local pain they sometimes put a pinch of cotton on the flesh and burn it there, repeating the process on a new spot at a little distance. Ordinarily their only resource is stoical submission.

SAN CARLOS AGENCY.

000 Report of Special Agent STEPHEN WHITED on the Indians of the White Mountain Apache reservation, Fort Apache subagency, and the Apache, Mohave, and Papago Indians of the San Carlos agency, Arizona, from August to November, 1890.

Names of Indian tribes or parts of tribes occupying reservations: (a) Arevapai, Chilion, Chirihahwa, Kolotero, Mimbres, Magollon, Mohavi, Pinal, San Carlos, Sauto, Tonto, and Yuma-Apache.

The unallotted area of the White Mountain reservation is 2,838,400 acres, or 3,900 square miles. The outboundaries have been surveyed. It was established, altered, or changed by executive orders November 9, 1871, December 14, 1872, August 5, 1873, July 21, 1874, April 27, 1876, and January 26 and March 31, 1877.

Indian population June 1, 1890: White Mountain Apaches, 2,121; White Mountain reservation, Fort Apache subagency, 1,930; total Apaches, 4,041; Mohave reservation, 331; Yuma reservation, Mohaves, 240; total at agency, 4,332.

The San Carlos agency is situated on a mesa immediately below the junction of the San Carlos with the Gila river. The altitude is about 2,900 feet above sea level. The records of the United States signal service show that the highest temperature for the summer of 1890 reached, July 6, 106°, the lowest for the winter of 1889–1890 was January 20, being 20°. The earliest frost in the fall of 1889 was November 2, and the latest frost in the spring of 1890 was March 16.

The agent reports to the Indian Office that many government buildings at San Carlos are in bad order. They consist of: No. 1, an adobe building 1 story high, 30 by 60 feet, one-half used as agent's dwelling, one-half for storehouse for grain, $1,000; No. 2, a 1-story adobe, built around a court, whole length about 300 feet, used for agent's offices, telegraph office, several rooms for dwelling, storerooms, shops, etc., whole in bad order, needs new roof, $3,000; No. 3, several small adobe buildings in rear of No. 2, used for shops, storerooms, etc., $200; No. 4, an adobe building, 1 story high, 32 by 52 feet, used as a meal shop, $300; No. 5, an adobe building, used for doctor's office and hospital, in bad order, $300; No. 6, a new stone building, 1 story high, 30 by 120 feet, with 4 cross partitions, built for storage, $5,000; No. 7, a stone building, same size as No. 6, now building, for shops; No. 8, a frame steam gristmill, $6,000; No. 9, a frame water gristmill (at Fort Apache), $6,000.

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a The statements giving tribes, census, and laws for agencies are from the Report of the Commissioner of Indian Affairs, 1890, pages 434–440. The population is the result of the census.